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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/808,225      | 03/23/2004  | Robert P. Masleid    | TRAN-P249           | 5029             |

7590 09/11/2006

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| EXAMINER |
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MAI, ANH D

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| ART UNIT | PAPER NUMBER |
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2814

DATE MAILED: 09/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

### Period for Reply

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2006.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 32-62 is/are pending in the application.  
4a) Of the above claim(s) 32-37 and 47-62 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 39-46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Status of the Claims***

1. Amendment filed March 03, 2006 has been entered. Claims 8-16 have been cancelled. New claims 32-62 have been added. Non-elected, claims 32-38 and 47-62 have been withdrawn. Claims 32-62 are pending.

### ***Election/Restrictions***

2. Applicant's election with traverse of Group IIA, new claims 39-46, in the reply filed on March 03, 2006 is acknowledged.

The traversal is on the ground(s) that the Examiner has restricted Group I and II based on "process of making" and "product made".

This is not found persuasive because as clearly indicated in the restriction, page 2, that Group I is directed to method of operation an IC, and the detail statement for the restriction is that the claimed device is fully function without the need for an epitaxy region that required by the operation of an IC. Which means the claimed method of operation an IC is directed to operation of a completely different device.

With respect to the species, although the claims are "comprising", however, the device as recited by each independent are having different features based on the multiple embodiments disclosed. Since the devices are directed to different species, the restriction is proper.

The requirement is still deemed proper and is therefore made FINAL.

***Claim Objections***

3. Claim 39 is objected to because of the following informalities:

Claim 39, line 3, recites: a deep n well capacitor structure comprising:

Following the term “comprising” a : (colon) is used instead of a ; (semi-colon).

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 39-46 are rejected under 35 U.S.C. 102(b) as being anticipated by Burr (U.S. Patent No. 6,218,708) of record.

With respect to claim 39, Burr teaches an integrated circuit as claimed including:

a plurality of transistors (302, 304) having a principal operating voltage;

a deep n well capacitor structure comprising:

a deep n well (309) comprising n-material coupled to the principal operating voltage; and

p-type material (p) disposed proximate the deep n well and coupled to the ground

reference. (See Fig. 3-6).

Regarding the operating voltage and ground reference, the Vnw (nwell voltage) is the same as Vdd, since the Vnw is split from Vdd and is coupled to the n well, thus called nwell

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voltage ( $V_{nw}$ ). Similarly,  $V_{pw}$  is split from  $gnd$  and is coupled to  $p$  material, thus called  $V_{pw}$ . (See Figs 1 and 2).

Regarding the term capacitor structure, since the structure of Burr comprises all elements of the claimed structure, thus the  $n$  well structure of Burr is capable of functioning as a capacitor. Furthermore, Burr explicitly teaches that “the wells function to hold a substrate potential and are characterized by a high capacitance”, hence capacitor structure. (See col. 4, lines 14-16).

With respect to claim 40, wherein the deep  $n$  well (309) of Burr is substantially surrounded by  $p$  type material ( $p$ ).

With respect to claim 41, the integrated circuit of Burr comprises a plurality of deep  $n$  wells (503). (See Fig. 5).

With respect to claim 42, the deep  $n$  well (309) of Burr is parasitically coupled to the principal operating voltage ( $V_{nw}$ ).

With respect to claim 43, the  $p$  type material ( $p$ ) of Burr comprises epitaxy.

With respect to claim 44, the  $p$  type material ( $p$ ) of Burr comprises bulk  $p$  material.

With respect to claim 45, the  $p$  type material ( $p$ ) of Burr comprises a  $p$  well.

With respect to claim 46, the  $p$  well ( $p$ ) of Burr is at substantially a same depth as said deep  $n$  well (503). (See Fig. 5).

### ***Response to Arguments***

5. Applicant's arguments with respect to new claims have been considered but are moot in view of the new ground(s) of rejection.

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Although the same reference is applied, however, the scope of the claims have been changed.

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

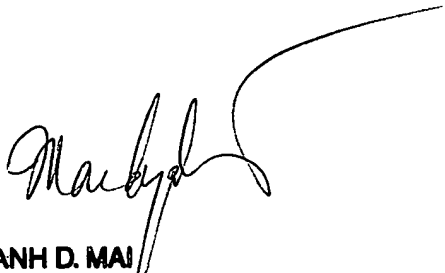
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh D. Mai whose telephone number is (571) 272-1710. The examiner can normally be reached on 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Anh D. Mai', with a long, sweeping horizontal line extending to the right.

**ANH D. MAI**  
**PRIMARY EXAMINER**